

Pieaggie Report.

The life and use of the Pieaggie as given by the Piute Indians of this part of California.

The Pieaggie butterfly is shaped like the common butterfly except the body is shaped more like the locust. This fly called by the Indians "Pieaggie butterfly" deposits the egg in the sheltered places in bark of trunk of tree between 1st and 10th of August.

In the middle of September the eggs hatch in the form of the caterpillar. A very dark brown at this time the bug is about $3/4$ to 1 inch long after hatching the worm or bug works towards the top of the tree feeding on the needles. In the fall, when cold, (October) they collect in a ball at the top of tree. They look like a swarm of bees and they remain in this stage until the later part of April the following season. They do not grow while in this ball of dormant state.

About April 25th they separate and start working down the tree feeding on the needles. From the 1st to the 6th of July the Pieaggies reaching its full growth the fat starts coming down the tree to the ground. They are now 2 to 5 inches long and $1/2$ to $5/8$ inches in diameter.

The Indians, in parties, are now ready to gather Pieaggies and they dig a trench around the trees 10 to 16 inches deep and 2 feet wide. The Pieaggies drop from the tree trunk into these trenches in great numbers where the Indians gather them in baskets made from willows and shaped like a cornucopia. When their baskets are filled and are being taken to camp by the women, the men are gathering to have the baskets filled by the time the women return. When all are gathered and brought to camp the process of curing begins. The Indians throw up great heaps or mounds of earth building fires on these mounds until the earth is hot enough to bake. The fire is then drawn and the Pieaggies are mixed alive into this hot earth and are left until about half done. They are a yellowish brown in color and tough but pliable. They separate the Pieaggies from the earth with baskets used as sieves and are then spread out to dry in the shade but the Indians keep burning fires continuously until the Pieaggies are thoroughly cured. The heat from the sun will spoil them. After being cured this way they are put into sacks and kept in a cool place.

The Indians then move them to their homes in the valley where they use these Pieaggies in stew consisting of Pieaggies, potatoes and salt and pepper - if they like they add other vegetables. Some of the white people who have eaten of this kind of stew say it has the flavor of mutton. This stew has a creamy color and is served with bread made from pinenuts or of sun flower seed ground very fine.

After the Indians have gathered all the Pieaggies they want (they never get them all). Those that are left come down the tree and creep into the ground at the bottom of the tree. They change color to a creamy white and shorten till about 1 inch in length, spins a web or cocoon in which they remain until time to form the butterfly the next spring.

The life of the butterfly beetle is two years - first year laying the eggs and hatching; second year Pieaggies as told.

Thus having a crop of Pieaggies every two years.

These Pieaggies are usually found on Yellow and Jeffrey Pine and do no damage to the trees as far as I am able to find out.

District Ranger Guy S. Way.

COPY

Smithsonian Institution
UNITED STATES NATIONAL MUSEUM

Washington, D.C.

August 30, 1920

Mr. Guy S. Way,
Forest Ranger,
Bishop, Cal.

Dear Mr. Way:-

I have been greatly interested in your observations on the Pieaggie of the Inyo Indians, and was delighted to get a plentiful supply of the worms alive some weeks ago. From your shipment we have already reared the moths, and find for the first time what the creature really is, although our earlier suspicion is confirmed. It is the moth known scientifically as Coloradia pandora. We are indebted to you for proof of this fact.

It was I who made the observations on this insect which came to Mr. Headley's attention and led to inquiries for material being made through the Forest Service. I was at Mono Lake in 1911, and got a couple of quarts of the dried caterpillars from a squaw, and published a notice of the matter in an entomological journal, with half-tones of the worms. I never had an opportunity to get any further. As I wrote down the account given me by the clerk in the Mono Lake store, and even that a day or two after he gave it to me, there were some mistakes printed, which I am now anxious to correct with your assistance; some points were also left in the dark. So I wish you would give me some more details.

First, how do they pronounce the name pieaggie? Is the first syllable like pumpkin pie?

Second, at what time in the summer do they collect them?

Third, how do they kill and dry them?

I think I have the idea of the trench correctly; it is to hold the worms from scattering after they come down, until the Indians come back and get them. As told to me, they use a smudge from fire in the trench, to make the worms drop; but this is a mistake, is it not?

From the fact that the moths come out the same fall or in midsummer (from analogy with other large moths we expected them to winter in the chrysalis and come out in the spring), it would appear that they lay their eggs on the pine needles in late summer and the eggs winter over in this position and hatch in spring, as it would be a still more remarkable thing of partly grown caterpillars were able to winter.

I have seen the photographs you sent Mr. Headley recently. I may want to use a couple of these in a second article on the insect.

Thanking you for favors received, I remain,

Sincerely yours,

J. Waldrich,
Associate Curator,
Division of Insects.

COPY

Dr. J.W. Aldrich,

Dear Sir:

In reply to yours of August 30, 1920.

I am very glad to learn that the insects (*Coloradia pandoria*) arrived in good condition, and will now answer your questions to the best of my knowledge.

(1) The Indians pronounce the Pieaggie as if it were spelt Pe-aggie with the emphasis on the first syllable.

(2) The Indian collect the Pieaggies from June 28 until July 10, depending on the weather as the weather must be warm before they start coming down the tree.

(3) They heap up great mounds of loose earth then build firest on the same and heat the mounds until they are hot enough to bake then they draw the fire and mix the live Pieaggies with the hot earth and leave the same for one hour.

Then they sift the earth from the Pieaggies with cone shaped baskets made purposely for this job.

Then the roasted Pieaggies are spread out on the dry ground in bark huts to keep them in the shade till they are thoroughly dry which takes two days. Then packed in sacks ready for use but kept in a cool dry place.

(4) Your idea of the trench is correct.

But they do not use a smudge in the trench to make the swarms come down or drop.

The Pieaggie lays their eggs in rough sheltered places in the bark of the pine trees.

In April the following year, after Pieaggie year, the pieaggies eggs hatch in July later part and work their way up the tree to the very top where they form into a ball in the pine needles and remain in this state (Dormant) until the following spring in May when they leave there dormant state and began feeding on the Pine needles.

They feed thus until full grown when they start down the tree for the ground or the Indian basket.

Hoping this may meet with your request.

I remain sincerely yours in Co-operation.

By _____
District Ranger

Bishop, California.